

## ABSTRACT

A rotor (17, 31, 55, 71, 91, 101, 121, 131, 141, 201, 401) of a motor (13, 51) is provided with a rotation shaft (21, 59, 410) and a plurality of magnets (15, 53, 75, 105, 210A, 210B, 411) on a circular periphery. Plates (25, 25A, 25B, 25C, 33, 63, 77, 107, 220, 300, 430) made of magnetic materials are provided so that each of which is magnetized by leakage flux of a corresponding magnet (15, 53, 75, 105, 210A, 210B, 401). The plates (25, 25A, 25B, 25C, 33, 63, 77, 107, 220, 300, 430) are disposed along a circular path such that a maximum flux density is formed at both peripheral ends. A magnetic sensor (27) outputs a signal in response to the variation of a flux density on the circular path.